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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,936	05/19/2006	Paul Smith	121939-04298105	7147

20995 7590 09/25/2008  
KNOBBE MARTENS OLSON & BEAR LLP  
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EXAMINER
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BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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09/25/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/501,936	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> Terressa M. Boykin	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 42-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6-30-08</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**Response to Arguments**

Applicant's arguments with respect to claims 42-66 have been considered and are persuasive but are moot in view of the new ground(s) of rejection.

**Claim Rejections - 35 USC § 102/103**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 42-66 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USP 3051993. see cols. 1-8.**

Note that a claim may be read in its broadest sense while remaining within the scope of the specification, the following reference is considered anticipated or rendered obvious. For that reason, note **USP 3051993** discloses porous polyethylene products and a process for preparing porous polyethylene sheets and shapes of high porosity and strength characteristics wherein a mass, i.e. a layer or shape of a high density, high molecular weight polyethylene in solid powdered form having particle size such that the major portion of the particles pass a 40 mesh U.S. screen and are 40 retained on a 200 mesh U.S. screen, is subjected, while confined within a porous support, to temperatures between about 300' F. and about 500' F, preferably between about 300' F. and about 450' F., while concomitantly passing a stream of hot inert gas through the supported powdered polyethylene for a time sufficient to cause "sintering" and adhesion of the

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polyethylene particles without complete fusion (thus no complete disentanglement) , and thereafter cooling the resultant cohesive, porous product. In col. 2 the reference states that the molecular structure of these polyethylene's is unique and gives rise to exceptional values for certain physical properties including toughness and strength. Note table 1 with regard to the typical values of molecular weights which overlap that which is claimed by applicants

The polyethylene and its porous support are placed in an oven which may be either preheated to the sintering temperature or may subsequently be heated to the desired level. The support will preferably be secured in gas-tight connection over the mouth of a gas inlet. Inert gas such as nitro,-en, carbon dioxide, etc., preferably preheated to sintering temperature, is passed through support and powdered polyethylene mass at a suitable rate to achieve the desired porosity. The support may consist of two porous supports, one above and one below the powdered polyethylene mass, with non-porous vertical supports as when sheets are being prepared, or it may consist of a porous shaped mold as in the case of other shapes, or any other convenient supporting device. In order to hasten the sintering process, we may spray the powdered polyethylene with a liquid swelling agent or solvating.@ agent for the polyethylene prior to sintering or we may pass solvating agent vapor through the polyethylene layer prior to passage of the inert gas or in conjunction therewith. Suitable solvating agents are the liquid hydrocarbons and chlorinated hydrocarbons having boiling points of at least about 110' C. Such solvating agents act at elevated temperature to swell and solvate the polyethylene and to lower the normal fusion point (ca. 275' F.) of the powdered

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polyethylene. Suitable solvating agents of the above character include toluene, xylene, decalin (tetrahydroxynaphthalene), tetrachloroethylene, etc. These may be vaporized if desired and passed through the pulverulent polyethylene mass together with the inert gas. Alternatively, reactive @gases of any desired character may be mixed with the inert gas and passed through the pulverulent polyethylene to simultaneously sinter and modify the chemical and/or structural characteristics of the resulting sintered product, for example butadiene, etc. If continuous operation is desired, polyethylene powder mass may be confined within the porous support on a moving conveyor belt, leveled as with a doctor blade, or formed to the desired shape, and the belt passed into a gas light heated chamber over the inert gas inlet at a rate sufficient to supply the required residence time at the temperature and as flow conditions, to achieve the desired results. The polyethylene materials which are suitable for use in this process are the normally solid, high molecular weight, high density polyethylenes which read on those claimed by applicants and discussed in applicants specification.

When the B sample was compacted after sintering to an apparent density of .46 in an attempt to improve its strength characteristics and still produce an acceptably high porosity in terms of intercommunicating voids of about 50% (control A), burst and tear values, although increased, still remained unacceptably low, particularly as compared to those of our products. Thus the burst strengths of our sintered products of similar porosity are at least about twice as great, and up to a-bout six times as great as those made by compacting a sheet prepared by prior art sintering technique without inert gas

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treatment. Tear strengths of the sheets of the reference are at least twice as great and up to four times as great as those of the conventionally prepared sintered sheets.

It is noted that the reference discloses molecular weight and not that of the weight average molecular weight, however, in view of applicants arguments on page 1, the two are taken as well known in the art.

Although applicant's claims do not disclose a sheet per se, the claims do claim articles made therefrom with polyethylene having not only exceptionally high molecular weight after sintering but also increased and beneficial physical characteristics and show in table 1. Any other properties or characteristics inherent in the prior art, such as the wear coefficient., although unobserved or detected by the reference, would still anticipate the claimed invention. Note *In re Swinehart*, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Note that the yield strength is disclosed as using different units than claimed but appear to result in the same improved characteristics. Further, since an orthopedic implant or an artificial implant may be that of a sheet, the claims are rendered inherent in view of the prior art. Further, the reference states that the partial disentanglement would be considered to inherently happen as a part of the heating process since the temperature ranges are the same.

**Correspondence**

**Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa Boykin whose telephone number is (571) 272- 1069 . The examiner can normally be reached at (571) 272-0580 on Monday through Friday from 9:30AM to 6:00PM.**

**If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck , can be reached at (571) 272- 1078 . The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.**

**Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).**

**/Terressa M. Boykin/  
Primary Examiner, Art Unit 1796**